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COMMITTEE ON THE PEACEFUL USES OF OUTER SPACE

VERBATIM RECORD OF THE THREE HUNDRED AND FIFTY-THIRD MEETING

Held at Graz, Austria,
on Tuesday, 28 May 1991, at 3 p.m.

Chairman: Mr. HOHENFELLNER (Austria)

- General exchange of views (continued)
- Organization of work

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The meeting was called to order at 3.15 p.m.

GENERAL EXCHANGE OF VIEWS (continued)

Mr. ZAMAN (Pakistan): The Pakistan delegation joins other delegations in acknowledging the commendable and outstanding work done by Ambassador Jankowitsch as Chairman of the Committee for the past 20 years. We also convey to you, Sir, our heartfelt felicitations on your unanimous election to the high office of Chairman of the United Nations Committee on the Peaceful Uses of Outer Space. Through your outstanding qualities of leadership, I am sure our Committee will acquit itself satisfactorily in dealing with the work of its current session.

Our Committee is undoubtedly very ably assisted by its Scientific and Technical and Legal Subcommittees, working under the chairmanship of Professor John H. Carver of Australia and Mr. Vaclav Mikulka of Czechoslovakia, respectively. My delegation takes this opportunity to extend its felicitations to both those distinguished personalities on the good work which the two Subcommittees under their leadership have been performing.

My delegation sees some forward movement in the work of the Scientific and Technical Subcommittee, and hopes that the Committee at its current session will be able to advance progress on all the agenda items, especially those which have been awaiting disposal for several years now. However, the Pakistan delegation is very much concerned about the lack of progress in the work of the Legal Subcommittee during its thirtieth session, although, until last year's session, it was registering good progress at least on the agenda item relating to nuclear power sources, and it was hoped that, with the pace of progress, consensus would be reached on all the remaining issues under this agenda item. My delegation strongly feels that the Legal Subcommittee should effectively utilize the time allocated to it for deliberation on its work.

(Mr. Zaman, Pakistan)

Since the last session of our Committee space technology has registered significant progress, which is well known to all delegations and was well stated by our outgoing Chairman. My delegation wishes to congratulate the countries with leading space programmes on the advances made by them in space technology fields. For the developing countries, the applications of space technology in the fields of remote sensing and satellite-based communications are of prime interest, as these directly contribute to the socio-economic advancement of their general masses. The entire focus of Pakistan's space programme is on the peaceful applications of space technology, and this policy will continue to be followed, giving maximum attention to the promotion of international cooperation in this regard.

After the general exchange of views the next agenda item deals with the subject of finding "Ways and means of maintaining outer space for peaceful purposes", to be considered on a priority basis. The General Assembly has, in operative paragraph 24 of its resolution 45/72, urged all States, in particular those with major space capabilities, to contribute actively to the goal of preventing an arms race in outer space as an essential condition for the promotion of international cooperation in the exploration and uses of outer space for peaceful purposes. The resolutions the General Assembly has adopted in recent years on this subject have led to long-drawn-out debates on the subject in our Committee as well as in the Conference on Disarmament. However, these debates did not in any way check the increased militarization of outer space. It is certainly to be regretted that those that have the capability and means are following a path which is taking them far away from the goals set by the United Nations. The Pakistan delegation has all along been voicing its serious concern over the impending danger of the unchecked

(Mr. Zaman, Pakistan)

militarization of outer space and demanding a complete halt of all activities causing an extension of the arms race in outer space, including military activities in any form aimed at using outer space other than for peaceful purposes.

(Mr. Zaman, Pakistan)

The Pakistan delegation therefore feels that, instead of confrontation and controls, there should be cooperation involving both the developed and the developing countries, for which concerted efforts will have to be made, especially by the developed countries, in view of the fact that military activities will seriously hamper international cooperation in the peaceful exploration and use of outer space, thus affecting the implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 82).

The United Nations Programme on Space Applications has witnessed an expansion in its scope during past years because of the commendable efforts of the United Nations Expert on Space Applications. The short- and long-term training courses offered by Member States in the areas of space science, remote sensing and satellite communications to the trainees from developing countries will certainly go a long way in assisting those countries in the development of their own infrastructure for the related technology. However, the Programme has continued to suffer from a scarcity of funds. The Pakistan delegation has been making appeals for enhanced funding for the Programme, but the response continues to be inadequate. As the Committee is already aware, Pakistan has been making regular cash contributions to the Programme since 1984 as continued support for it. My delegation believes that support from within and outside the United Nations system for the Programme has to increase vastly to meet the requirements of the developing countries.

The Pakistan delegation is pleased to inform the Committee that the Government of Pakistan is hosting three important events during October 1991 and May-June 1992. The first is the Regional Seminar on Applications of Remote Sensing Techniques to Land-Use Planning and Environmental Surveying, to

(Mr. Zaman, Pakistan)

be held in Karachi from 21 to 27 October 1991. The second and third are a Meeting of the Directors of the National Remote Sensing Centres/Programmes in the Economic and Social Commission for Asia and the Pacific (ESCAP) Region and the Ninth Session of the Intergovernmental Consultative Committee on the Regional Remote Sensing Programme, both to be held in Karachi in May-June 1992, for the benefit of ESCAP-region countries.

The Working Group of the Whole has been performing a commendable job of evaluating the implementation of the UNISPACE 82 recommendations, which will go a long way in improving the execution of various activities concerning international cooperation and assisting in setting up the priorities to be followed by the United Nations Programme on Space Applications. My delegation would like to stress the strong need for better coordination of the programmes of space technology applications being implemented by the various agencies in the United Nations system. In order to bring this about, the Committee may consider measures for further strengthening of the United Nations Programme on Space Applications and other related activities within the United Nations system, keeping in view particularly the needs of the developing countries.

It is heartening to learn that it is planned to launch an increasing number of remote-sensing satellite systems during the 1990s. That is certainly encouraging for the scientific community using remote-sensing data worldwide. However, my delegation has been drawing attention in this forum to the adverse impact of excessive commercialization of remote-sensing activities and services offered by the satellite-operating States, which discourages the participation of the developing countries, especially those having their own satellite ground receiving stations, in remote-sensing programmes. While this trend is to be strictly checked, there is a strong need to share experiences and technologies between the developed and the developing countries in this

(Mr. Zaman, Pakistan)

important discipline, through international and regional frameworks and also through collaborative projects, especially for monitoring and protecting the Earth's environment.

It will be recalled that the General Assembly, at its forty-first session, in resolution 41/65, adopted the "Principles relating to remote sensing of the Earth from outer space", recommended by our Committee at its twenty-eighth session, held in 1985. My delegation would emphasize the need for the Scientific and Technical Subcommittee to discuss the remote-sensing activities conducted in accordance with those principles in order to develop an international regime to regulate the satellite remote-sensing activities in conformity with those principles.

An important issue to be discussed by the Committee is the protection of the Earth's environment. In this connection, operative paragraph 21 of General Assembly resolution 45/72 recommends

> "that more attention be paid to all aspects related to the protection and the preservation of the outer space environment, especially those potentially affecting the Earth's environment",

while in paragraph 22 the General Assembly considered that it was essential that

> "Member States pay more attention to the problem of collisions with space debris and other aspects of space debris"

and called for

> "the continuation of national research on this question".

In that context, the General Assembly in paragraph 23 considered that space debris could be an appropriate subject for discussion by our Committee in the

(Mr. Zaman, Pakistan)

future. My delegation strongly supports the view that the matter of space debris should be discussed, not only by our Committee in the current session, but also by the Scientific and Technical Subcommittee in its future sessions.

Before concluding, the Pakistan delegation would like to reaffirm its continued support for the efforts directed towards making progress in the Committee's work. My delegation proposes to make further contributions on the individual agenda items as and when they are taken up for discussion.

The CHAIRMAN: Mr. Zaman, newly appointed head of the Pakistan Space and Upper Atmosphere Research Commission, is possibly apart from Mr. Jasentuliyana the only person present in this room who participated in the First United Nations Conference on the Exploration and Peaceful Uses of Outer Space, held in 1968 in Vienna.

Mr. VALENCIA (Ecuador) (interpretation from Spanish): My delegation would like first, Sir, to congratulate you on your election to the chairmanship of this Committee. We are familiar with your personal and professional qualities and the special interest you have always shown in the Committee's work. We are therefore sure that the Committee will be able to make significant achievements under your leadership, and we promise you Ecuador's full cooperation.

We should also like to express our country's gratitude to Ambassador Jankowitsch for the way in which he led the Committee. His dynamism was to a great extent responsible for the achievements of the past two decades. Please communicate our gratitude to Ambassador Jankowitsch, Sir.

(Mr. Valencia, Ecuador)

World events of the past decade have produced important changes in international relations, as has often been repeated in many forums and in written articles. However, certain elements shaping international relations have remained the same despite those changes, showing by their persistence that they do not directly depend on the state of relations between the great Powers, but result from other factors.

One of those elements is the danger of the militarization of outer space. At a time when international tension has decreased, the community of nations should get down to the task of ensuring that the arms race is not extended into areas that were previously free of the problem. Like other delegations, Ecuador believes that the Committee is the competent body to deal with it. To do so would not be to encroach on the mandate of other bodies, such as the Conference on Disarmament or the First Committee of the General Assembly, since we believe that the Committee, specializing in the peaceful uses of outer space, should cooperate in the task of safeguarding observance of a principle enshrined in an international treaty, through coordinated action by all States, in cooperation with other relevant forums of the international system.

My delegation wishes to express its gratitude for the praiseworthy work the Secretary-General has done in coordinating cooperative activities in space matters with the developing countries. The major space programmes of the world invest a great deal of money in their operations. The developing countries derive a small proportion of the benefits of those programmes precisely because of their limited economic resources. That is a fact, resulting from circumstances that we shall not analyse now, but it is important to remember it if we are to appreciate the importance of the work of

(Mr. Valencia, Ecuador)

the Outer Space Affairs Division and the Programme on Space Applications. In an area of such importance for the developing countries, their actions make a reality of the principle of international cooperation enshrined in the United Nations Charter and the outer space Treaty.

Here I am thinking of activities such as the Space Conference of the Americas, held in Costa Rica, which I would highlight for the benefits and prospects it presents for the region to which my country belongs. Such activities make clear the beneficial results of cooperation between countries with advanced space technology and countries interested in using new tools for development. I should like to express Ecuador's gratitude to the Government of Chile for the kind invitation it has extended to host the Second Space Conference of the Americas. We highly appreciate Chile's offer to host an event of great importance for Latin America, one which our country will happily attend.

Some delegations have been somewhat discouraged to see the stagnation of discussions on nuclear power sources in outer space. Ecuador would have liked to see the differences on this matter overcome in 1991, but that was not to be. Worse still, there has been a proposal to reopen matters that we thought had been resolved.

Nevertheless, our delegation is optimistic that the norm of consensus, which requires respect for the opinion of others and flexibility in order to achieve common goals, will enable us to reach a final agreement without too much delay. We join other delegations in appealing for a demonstration of political will and a desire for consensus and the setting aside of inflexible positions.

(Mr. Valencia, Ecuador)

Our delegation has carefully followed the work of the Legal Subcommittee on the delimitation of outer space and the geostationary orbit. Our position on the geostationary orbit is well known. We continue to believe in the need to consider the establishment of a special legal regime to govern the rights of States to that orbit, taking particular account of the rights and needs of the developing countries in general and the equatorial countries in particular.

The prospect of the saturation of that limited natural resource is not remote for future generations. If we do not guarantee and regulate in advance the rights of countries that do not now have the technological capacity or the need to use the orbit, there will be a difficult problem because of what has already been done. We therefore have a responsibility to stress this point, and to do so creatively, as was the case in the latest initiative of some members of the Group of 77 at the last session of the Legal Subcommittee. Although we do not agree with everything in the document they produced, we regard it as a useful tool to promote discussions between delegations on this subject.

Our delegation welcomes the direction taken in the work of the Legal Subcommittee on the principle that the exploration and utilization of outer space should be for the benefit of all States, and particularly the developing countries. We highly value the working document submitted by various delegations to the Subcommittee at the end of the last session. We are convinced that that document, and other initiatives, will enable us to make useful progress in the Committee's work on the subject.

(Mr. Valencia, Ecuador)

I do not wish to conclude without expressing, through you, Sir, our gratitude to the people and Government of Austria for the warm welcome they have given the Committee at this session. Special mention should be made of the invaluable cooperation of the Styrian authorities and the city of Graz.

Mr. STEFANOV (Bulgaria): At the outset, Sir, I should like on behalf of my country's delegation to congratulate you on your election to the post of Chairman. We are convinced that under your able guidance the Committee will make a significant contribution at its thirty-fourth session to the development of international cooperation in the peaceful uses of outer space. I also congratulate the other officers of the Committee, and wish them success in their work.

The past year has seen some remarkable developments in international relations, which will certainly offer greater opportunities for expanding international cooperation in the political, economic and social spheres. It is my delegation's view that in the context of these opportunities the Committee and its subsidiary bodies will rededicate themselves to promoting international cooperation in the peaceful uses of outer space for the benefit, and in the interests, of all States.

New States are joining in space research every year, while the difficulties and the complicated nature of such research require not only considerable knowledge, but also significant financial resources, making space exploration nearly impossible for any single State to conduct, no matter how powerful it may be. International cooperation is therefore an important and necessary condition for the success of the use of outer space for peaceful purposes.

(Mr. Stefanov, Bulgaria)

Time has proved the usefulness of the Committee as a unique body for international cooperation in this specific field. An example of its successful operation is the outcome of the sessions of the two Subcommittees earlier this year. The Bulgarian delegation welcomes the efforts of the Scientific and Technical Subcommittee and the Legal Subcommittee to adopt recommendations for the safe use of nuclear power sources, a question that has a direct bearing on the preservation of the environment and is therefore of enormous significance. My delegation believes that the way has been paved for further constructive work at the current session, and welcomes document A/AC.105/C.2/L.154/Rev.9, submitted by Canada and Germany. We should now pay special attention to the elaboration of draft principles relevant to the use of nuclear power sources, with the aim of arriving at a final text as soon as possible. In our understanding, these principles should ensure maximum safety in the operation of nuclear power sources in outer space, bearing in mind that their use is an ultra-hazardous activity.

(Mr. Stefanov, Bulgaria)

We believe that work should continue on the other important matters on the agenda of the Legal Subcommittee, such as the definition and delimitation of outer space and the character and utilization of the geostationary orbit in order to bring closer the positions of the Member States on these items. The legal aspects of the application of the principle that the exploration and utilization of outer space should be carried out to the benefit and in the interests of all States, taking into particular account the needs of the developing countries, being discussed in the Legal Subcommittee, are also of considerable importance.

Bulgaria is a small country of limited material resources that determine our interest in international, regional and bilateral cooperation in space activities. The space research in Bulgaria is carried out in the following main fields: space physics, space astronomy, remote sensing of the Earth, space biology and medicine, and satellite communications.

In 1990, Bulgaria performed space-physics research through the Aktivni, Interball and Granat projects. Processing of data obtained after the Shipka programme onboard the Mir station was completed. Some of the Bulgarian instruments continue to operate aboard the space station. Remote sensing of the Earth is concentrated mainly in the framework of the international projects Susha and Priroda. My country participates in the INTERCOSMOS working groups and last year Bulgaria hosted the Workshop on Space Physics in Varna. Future research efforts will be aimed at monitoring and solving a series of ecological problems, both for the Black Sea and the surface area of Bulgaria. The object of these efforts is to develop and adjust systems and technologies for the ecological monitoring and preservation of the natural habitat. A more detailed review of Bulgaria's national outer space activities

(Mr. Stefanov, Bulgaria)

in 1990 was submitted to the Secretariat for circulation as a document of the Committee on the Peaceful Uses of Outer Space.

The current session of the Committee will examine a number of important topics. One of them, included three years ago as a new agenda item in accordance with paragraph 21 of General Assembly resolution 43/56, is "Spin-off benefits of space technology: review of current status". The willingness of the outer space Committee to examine this problem is proof of the United Nations commitment to the implementation of space achievements in many economic and social aspects of life, the most important being medicine and ecology. The discussion of this issue permits States to exchange information on new materials and technologies which have been experimented on or obtained in space and can be applied on Earth. Thus, space exploration and research influence the development of technologies and of the national economies of States in all parts of the world.

I would like to express the hope of my delegation that the work of the current session of the Committee on the Peaceful Uses of Outer Space will be conducted in a constructive atmosphere and that States will show goodwill and the desire for cooperation in the spirit of our time. My delegation is prepared to contribute to that end.

Mr. MANDESCU (Romania) (interpretation from French): At the outset, I should like to join other delegations in expressing pleasure at participating in this session of the Committee on the Peaceful Uses of Outer Space, which is being held for the first time in this marvelous city of Graz, with all of its vestiges of the past. We also extend our gratitude for the warm welcome from the officials of the host country.

(Mr. Mandescu, Romania)

I should also like to extend to you, Sir, on behalf of the delegation of Romania, our warmest congratulations on your election to the chairmanship of the Committee and our best wishes for success. We are convinced that, thanks to your vast experience on space issues, the work of the Committee under your guidance will move towards the real progress that is expected and hoped for by all countries.

I, too, was very moved at the excellent statement made at the opening of the session by Mr. Peter Jankowitsch, speaking for the last time as Chairman of the Committee. He highlighted many important space events, in particular those already in operation, in connection with the period elapsed since the last session of the Committee. Without wishing to repeat them here, we should simply like to join in the congratulations he extended to those delegations whose countries experienced a measure of success in the conquest and peaceful use of outer space. The Romanian delegation also joins other delegations that warmly congratulated Mr. Peter Jankowitsch for his fruitful activities as Chairman of our Committee and for his efforts to strengthen international cooperation in space activities and to ensure that numerous countries had access to new technologies.

I should like to recall that Romania has decided to steer its space activities towards practical applications, while also promoting the participation of Romanian researchers in international efforts aimed at increasing knowledge of outer space and studying the biosphere, the Earth's crust and human behaviour and life in interplanetary space.

Romania recently became a member of INTELSAT; it has a ground-receiving station with two antennas providing direct telecommunications links with almost all regions of the world. Romania has also become a member of EUTELSAT

(Mr. Mandescu, Romania)

and INMARSAT. The construction of a EUTELSAT ground-receiving station and studies for the construction of two INMARSAT antennas are already under way. We have also begun to equip sea vessels with satellite telecommuncations and navigation equipment built in Romania. In meteorology, we use satellite images, also received via equipment built in Romania, to forecast weather.

In remote sensing, we have focused our efforts on pilot projects, primarily in the fields of agriculture, ecology, geology and hydrology. The extremely high cost of satellite data keeps remote sensing from being applied as an operational method in Romania.

(Mr. Mandescu, Romania)

I turn now to the subject of participation in scientific research in outer space. Romanian specialists have been encouraged to carry out experiments on satellites launched in cooperation with the INTERCOSMOS programme, primarily for studies on earth magnetism, processes in the Earth's outer atmosphere, cosmic radiations, and the behaviour of living organisms in space, as well as on the fine-tuning of technologies in space conditions. In the near future, two magnetometres for the APEX project, which will be launched this year, are being prepared, as are a quadripolar spectrometre for the SAS satellite, to be launched in 1992, and equipment for the Priroda project, also to be launched in 1992; experiments are also being carried out in connection with BIOSPUTNIK, to be launched in 1992, and two neutron spectrometres for the MARS-94 and MARS-96 programmes.

In conclusion, it is hoped that the research and space applications programmes will satisfy the immediate needs of our economy while we continue to work with programmes of international cooperation which have already established or are being established in this field and to which our industry should make an increasingly important contribution. It should be pointed out that in recent months preliminary contacts have been set up with representatives of the European Space Agency for the purpose of defining the legal framework for cooperation in space activities.

The excellent statement at the opening of this session showed the importance and complexity of the problems which the Committee has on its agenda and for which it must find solutions. Like other delegations, we are in favour of solutions entailing broad international cooperation that can ensure access by all States to space technology and its applications. The delegation of Romania will speak further on these items later in the debate.

(Mr. Mandescu, Romania)

We would simply like now to highlight agenda item 6 - "Ways and means of maintaining outer space for peaceful purposes". This could well become a permanent item on the agenda, without any hope of the Committee's being able to reach agreement.

My delegation will be prepared to speak when necessary on specific items on our agenda and to contribute fully to the success of this session.

Before concluding, I should like to extend our thanks to Mr. Jasentuliyana and Mr. Abiodun, as well as to other members of the secretariat of this session, for their efforts in preparing for it.

Mr. HIENSCH (Netherlands): It is with great pleasure that my delegation addresses the thirty-fourth plenary session of the Committee on the Peaceful Uses of Outer Space, organized in the rather splendid surroundings of the city of Graz, in the heartland of Austria, at the generous invitation of the Austrian Government. It seems particularly appropriate that this year's session of the Committee should be organized in Austria as we are bidding farewell to Peter Jankowitsch, who has been an outstanding Chairman of this Committee for almost 20 years. My delegation takes this opportunity to extend its sincere gratitude to the outgoing Chairman for all his good work in the service of the Committee and at the same time to extend a warm welcome to the new Chairman, Ambassador Hohenfellner. Your appointment as Chairman, Sir, strengthens our hope that the Committee will be able to deal with the challenges it faces because of current developments.

My delegation would have liked the entire contents of its statement to be on an optimistic and positive note. However, when we look at the results achieved by the Scientific and Technical and the Legal Subcommittees, there seems to be reason to be cautious in this respect. The outcome of both

(Mr. Hiensch, Netherlands)

Subcommittees' deliberations has, frankly speaking, been rather disappointing to my delegation. In this context, I should like to refer in particular to the deliberations of the Scientific and Technical Subcommittee concerning the approach to take with regard to the ever-growing problem of space debris.

It seems striking that, as far as the Earth environment is concerned, the international community is prepared to approach the matter in a concerted way, since mankind has come to realize that international cooperation is required if future generations are to reap the benefits of planet Earth. The same approach ought to be taken where outer space is concerned.

The problem of space debris has come to be recognized as one of the challenges to the future exploration of outer space, which - and my delegation is sure this Committee does not need to be reminded of this - is particularly important to the developing countries, particularly in the field of the possible uses and applications of remote sensing. As space technology will undoubtedly play an increasingly important role in our common endeavours to protect the Earth as well as the space environments, my delegation would like to urge the Committee to come to an agreement on how to deal with the issue of space debris in future.

My delegation would have wished to be able to stop its rather critical account of the work of the Subcommittees at this point. However, one other important point needs to be made, and it concerns nuclear-power sources in space. My delegation would like to stress the great importance the Netherlands attaches to the speedy finalizing of the draft principles. The different viewpoints on this matter came clearly to light during the meetings of the Legal Subcommittee and contributed to the rather disappointing outcome. It is with this in mind that my delegation calls upon all Committee members to build on the progress made so far and, in a spirit of cooperation,

(Mr. Hiensch, Netherlands)

to try to come to an agreement on the outstanding issues pertaining to this question.

Although my delegation has made use of the opportunity to remind the Committee of the many hurdles it has to remove with respect to outer-space issues, it seems equally appropriate to mention at this point the occasions on which the Committee could play a positive role. One has only to think of the United Nations Conference on Environment and Development, to be hosted by Brazil in 1992, or of the various activities to be organized within the framework of International Space Year.

My delegation would like to conclude its brief statement by expressing the hope and sincere wish that this session of the Committee on the Peaceful Uses of Outer Space will help contribute to the preparation of these future activities and that the Committee may at the same time make some headway on the important challenges before it.

Mr. TETU (Canada): Allow me, Sir, to congratulate you warmly on your election to the chairmanship of the Committee on the Peaceful Uses of Outer Space. I have no doubt that your solid credentials in the field of United Nations affairs will enable you to guide the work of the Committee towards full success. I wish also to express to former Chairman Peter Jankowitsch Canada's appreciation for his outstanding performance in the course of the 20 years he presided over the deliberations of the Committee. We take this opportunity to wish him all the best in his new function.

Once again the Committee is seized this year of a large number of important issues. The wunderschöne city of Graz certainly provides an excellent environment for achieving progress on these issues. Among them figures prominently the issue of the use of nuclear power sources in outer space, dealt with by the Scientific and Technical and the Legal Sub-Committees of this Committee.

In that regard, the Committee has already agreed to six principles. Productive discussions were held at both sessions of the two Sub-Committees. We believe that these discussions contributed to the narrowing of differences relating to outstanding principles 1A, 4, 8, 9 and 12. We are hopeful that further work will be done on these principles at this session of the Committee, with a view to reaching agreement on them by the end of the session.

We understand that one delegation has had some further thoughts about one of the principles agreed to by consensus more than a year ago. We deplore the fact that this has led to a proposal that constitues an attempt fundamentally to alter the cornerstone of the draft principles relating to the use of nuclear power sources in outer space. Principle 3 has been agreed to by all delegations, including the delegation to which I have just referred. Principle 3, Mr. Chairman, was the result of 13 years of hard and thorough

(Mr. Tetu, Canada)

work done by experts from all countries involved. The delegations to the Committee on the Peaceful Uses of Outer Space have worked hard for many years to find a workable solution that improves world-wide safety without at the same time standing in the way of the development and use of this important power source. We cannot allow the results of this hard work to be undone. The intervention of this one delegation is all the more regrettable because without it we would have been in a position to adopt the complete set of principles at this very session.

Turning now to Canada's ongoing cooperation in space, we are proud to be hosting the next congress of the International Astronautical Federation (IAF) in Montreal next October. This event will be attended by space experts from around the world. Canada is committed to assisting developing countries in gaining access to the benefits of space activities. In that regard, we provide support through bilateral activities, in particular those of the Canadian International Development Agency, and we assist the United Nations Programme on Space Applications by providing experts for seminars organized for developing countries. In the same vein, we shall sponsor, within the framework of this programme, a workshop on space technologies for development, immediately before the IAF congress to which I have referred. This workshop has already been referred to in the statement by the Chief of the Outer Space Affairs Division.

With respect to the issue of the consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit of all States, taking into account the needs of developing countries, we welcome the initiative to introduce draft principles in that regard taken by some countries at the last session of the Legal Subcommittee. We appreciate the

(Mr. Tetu, Canada)

efforts made by its authors, efforts which will facilitate our further consideration of this important issue.

I should now like to report on some major developments in the Canadian space programme in the last year. I should also like to call the attention of delegations to a recent publication outlining Canada's space activities that shows how Canada's space programme has developed through international cooperation.

The single largest activity in Canada's present space programme is the development of the mobile servicing system, to be used for the assembly and maintenance of the international space station. Our space station partners are the United States of America, Japan and the European Space Agency (ESA).

In the past year, work has intensified on the RADARSAT remote sensing satellite, planned to be launched in 1994 by the United States. Several space science cooperative activities are under way with the USSR, and, indeed, at this very moment Canadian and Soviet experts are meeting in Ottawa to plan further cooperation. Also in the past year, Canada finalized cooperative arrangements with the European Space Agency on five ESA technology development programmes dealing with advanced space communications, earth observation and space transportation.

Finally, our delegation notes with satisfaction the growing attention being devoted to questions of space and environment. This is the logical outcome of the increasing concern with environmental questions around the world. It is evident in two aspects: first, the use of space technologies such as remote sensing to gather information useful for research on environmental problems on Earth and for managing natural resources; and, secondly, the protection of the Earth environment and the space environment from potentially hazardous activities.

(Mr. Tetu, Canada)

Our delegation looks forward to continuing these important discussions in the coming year.

Ms. REDEKER (Germany): First of all, Sir, I should like to congratulate you on behalf of the Federal Republic of Germany on your election as Chairman of the Committee on the Peaceful Uses of Outer Space. I am sure that your wealth of experience in diplomacy and international law will prove valuable and stimulate the work of the Committee.

At the same time, I should like to express my sincere appreciation for the most efficient work carried out by the former Chairman, Mr. Jankowitsch, for so many years.

It is customary for our delegation to begin with a description of Germany's main space activities.

With respect to the fundamental rules of space law, Germany adheres to the principle of the peaceful use and exploration of outer space. This is clearly illustrated by our ongoing space projects, by our objectives and also by the spirit and facts of our international cooperation. Furthermore, our space activities prove that the Federal Republic of Germany does not regard space as only a scientific and technical opportunity which is of special significance because it opens up totally new dimensions for the benefit of mankind: space activities have also been successfully initiated and still offer great potential for bringing Europe and all the countries of our globe together on joint projects for mutual benefit, which helps to strengthen transatlantic friendship, improve East-West relations and foster cooperation with and for the benefit of the developing countries.

(Ms. Redeker, Germany)

Germany makes a major contribution to the programmes of the European Space Agency (ESA) and carries out bilateral and multilateral activities on a national basis. For instance, the ULYSSES probe, launched in 1990, and the HIPPARCOS satellite, launched in 1989, are successfully collecting valuable scientific data, HIPPARCOS as the first space-based stellar parallax observatory and ULYSSES as an observation instrument for the heliosphere. Since June 1990, ROSAT, the X-ray telescope satellite, has considerably widened our knowledge of stellar X-ray sources. Regarding the need and the potential for telecommunications by satellite, efforts are being made to improve the relevant technology and enhance the opportunities for world-wide application.

Further scientific missions planned by Germany are the spacelab D-2 mission focused on microgravity research, scheduled for launch in 1993, and the participation of a German scientific astronaut in a flight to the Soviet space station MIR, a project due to take place in 1992.

Germany is also extensively engaged in the ESA programmes ARIANE 5, HERMES and COLUMBUS, the latter being a contribution to the international space station FREEDOM. To promote these programmes in the right way and to deal with future aspects of the European Long-Term Space Plan, as well as with the encouraging new situation in international cooperation, ESA member States will hold a Council meeting at ministerial level later this year, which Germany will have the honour of hosting.

As to space-based Earth observation, I should like to mention a project serving environmental protection purposes: the ERS-1 satellite, which is to be launched soon. From the very beginning, Germany has regarded this project as particularly important, and therefore assumed the leading role in the construction of the ERS-1.

(Ms. Redeker, Germany)

It should also be mentioned that Earth observation is to be one of the main areas of attention during International Space Year (ISY), of which the main conference in Europe will be held in Munich in spring 1992.

These examples demonstrate the close connection of German space activities with European and international space projects and, at the same time, prove the success of the joint ventures so far. Here, the German delegation would like to draw the attention of the Committee to two anniversaries which mark outstanding events in space flight: 30 years ago, in April 1961, the USSR undertook the first manned space flight, sending Yuri Gagarin into orbit; and, 10 years ago, in April 1981, the United States of America launched its first shuttle, Columbia.

Germany is confident that space exploration will continue for the benefit of all nations. Numerous activities at the national level and in the international context, for example, in this Committee and in its Subcommittees, have yielded fruitful results. At this point, the German delegation would like to mention the important nuclear-power-source principles, and to stress the need to conclude deliberations on them as soon as possible.

The CHAIRMAN: I now have the pleasure of calling on the representative of the International Law Association (ILA). The ILA is for the very first time attending the meetings of the Committee as an observer.

Mr. BÖCKSTIEGEL (International Law Association (ILA)): Let me first of all join those who have congratulated you, Sir, on your election to the chairmanship of this important Committee. As you said, this is the first time the International Law Association has spoken before this Committee, and I should like to express to the Committee my organization's appreciation for its having granted last year ILA observer status at its session.

(Mr. Böckstiegel, ILA)

As you know, Mr. Chairman, I had originally felt that the ILA should sit in quietly at the sessions of the Legal Subcommittee and the main Committee this year, in order to get better acquainted with your procedures before we speak up and try to make a contribution to your important discussions, but you and others kindly encouraged me to make at least a short statement as early as this session.

The International Law Association was founded as long ago as 1873 at a conference in Brussels, and has, ever since, been a non-governmental international organization of academics and practitioners in the field of international law. The ILA has some 40 national branches, in addition to its headquarters in London; its work is presented and formalized at biannual conferences held in various places world-wide. The last conference was in Australia last year, the next one will be next year in Cairo, and the work is mainly carried out between these conferences by committees which are established for the various fields of public and private international law.

One of these committees is the Space Law Committee, of which I have the honour to be chairman; its rapporteur is Professor Williams of Argentina, and its members are distinguished specialists in the field, many of whom are well known to members of the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee.

In this short address, allow me to mention, briefly and for your information, the subjects on which the ILA Space Law Committee has been concentrating recently.

At the ILA conference in Paris, in 1984, the Space Law Committee concluded several years of work by producing a final version of a draft convention on the settlement of space law disputes. At the ILA Seoul conference in 1986, the ILA gave a mandate to the Space Law Committee to

(Mr. Böckstiegel, ILA)

elaborate principles and guidelines on debris and pollution arising from activities in outer space. The work on this subject culminated in an international interdisciplinary symposium, which my own institute, the Institute of Air and Space Law at the University of Cologne, organized, along with the ILA space law committee and the International Institute of Space Law in Cologne in 1988; several prominent members of this Committee took part. The proceedings of this colloquium have been published.

The results were then examined at the 1988 conference of the International Law Association in Warsaw, and the work of the Space Law Committee continued on that basis and ended with a comprehensive report, on the basis of which, in 1990, the ILA conference in Australia gave a mandate to its Space Law Committee to start work on drafting an international instrument on the environmental aspects of space activities, and on space debris in particular. That work is now on its way between members of the Space Law Committee, with the assistance of two of the top technical experts in this field, well known to many of you, namely, Dr. Perek of Czechoslovakia and Professor Rex of Germany.

In this context, I noted with great interest that not only General Assembly resolution 45/72 of February this year, but also several statements by delegations made at this meeting had identified the environmental aspects of space activities, and particularly space debris, as appropriate subjects for discussion in this Committee and in its two Subcommittees. The International Law Association shares that view, and will of course be ready, and happy, to assist in any work done in this field.

Finally, let me identify two other areas which have been mentioned as being of interest for this Committee and its two Subcommittees, and in which we may be able to be of some assistance, if that is considered desirable.

(Mr. Böckstiegel, ILA)

Firstly, General Assembly resolution 45/72 stresses that databanks at the national and regional levels should be strengthed. In this context, it may be of interest that the Institute of Air and Space Law at Cologne University has built up a database on space law and is now cooperating with the European Space Agency, where a database called ESALEX is at present being built up.

(Mr. Böckstiegel, ILA)

Secondly, at its session last March the Legal Subcommittee took note of the draft for a convention on manned space flight presented at that session by the International Astronautical Federation (IAF). Since that draft convention is the result of several years of cooperation between the Academy of Sciences of the USSR, the University of Mississippi in the United States of America and our Institute of Air and Space Law in Germany, if any efforts on this subject would be considered appropriate by this Committee or its Legal Subcommittee I am sure that not only the national research institutions mentioned but also the International Law Association would be ready to be of assistance, if desired, together with the International Institute of Space Law, which presented the draft convention, through the IAF, to the Legal Subcommittee.

The CHAIRMAN: I now call upon the representative of the Committee on Space Research (COSPAR).

Mr. NIEMIROWICZ (Committee on Space Research (COSPAR)): The Committee on Space Research (COSPAR) wishes to pay a tribute to the most constructive role played by Ambassador Jankowitsch during his almost 20 years as Chairman of this Committee. I should also like, Sir, on behalf of COSPAR, to express our most sincere wishes for the success of the Committee's continued activities and of your able chairmanship.

It is my great privilege to represent here the President of the Committee on Space Research (COSPAR), Professor W.I. Axford. I bring to this assembly his earnest wishes for its most fruitful deliberations.

COSPAR is now deeply involved in preparations for the forthcoming International Space Year (ISY). The programme of the World Space Congress, which is to be held at Washington D.C. from 28 August to 5 September 1992, and which we are co-organizing with the International Astronautical

(Mr. Niemirowicz, COSPAR)

Federation (IAF), is well under way. Our Committee is also cosponsoring the European International Space Year Conference, which will take place at Munich from 30 March to 4 April 1992. COSPAR is also responsible for the organization of one of the satellite symposiums on space science organized during the Munich conference.

In response to a request from the Space Agency Forum for the International Space Year (SAFISY), COSPAR in 1990 created a Panel of Space Science Experts (PSSE). That Panel has already finalized 30 project proposals for presentation to SAFISY and has identified the potential lead and contributing organizations. The Panel has also determined how each project's results will be reported in 1992. In addition, it has recommended "Perspectives from Space" as the main theme for the SAFISY space science activity. The Panel presented its report to SAFISY's fourth meeting at Moscow on 16 and 17 May, and I am most happy to inform the Committee that all 30 projects proposed have been approved by SAFISY.

COSPAR is also organizing two ISY-related events to take place in the United States of America prior to the World Space Congress, namely, a colloquium on "Critical problems in the plasma environments of comets and other non-magnetized and weakly magnetized bodies", to be held at Ann Arbor, Michigan, from 24 to 27 August 1992, and, during exactly the same period, a second colloquium on "Initial results from the Solar Terrestrial Energy Programme (STEP) facilities and theory campaigns", to be held at Laurel, Maryland.

Our Committee is particularly pleased to join the United Nations and the IAF in organizing the Symposium on Space Technology in Developing Countries for the World Space Congress. The new theme for 1992, "Space Technology and the Protection of the Earth's Environment: Development of Endogenous

(Mr. Niemirowicz, COSPAR)

Capabilities, in Particular in the Developing Countries," proposed by the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space, is very timely. COSPAR is prepared to coordinate efforts with the IAF to hold a special symposium on this topic during the thirtieth session of the Subcommittee.

The satisfaction that the Scientific and Technical Subcommittee expressed with COSPAR's role in organizing, with the IAF, the symposium on applications of remote sensing for mineral, water, biological and agricultural resources, which was held during the 1991 session of the Subcommittee, is much appreciated.

I should like to take this opportunity to make grateful acknowledgement of the support the United Nations Outer Space Affairs Division has extended to COSPAR's endeavours. In addition, the high ratings given by the United Nations to our annual reports on the progress in scientific space research are a continuing source of encouragement to our organization.

Lastly, I cannot help but recall that in 1984 COSPAR held one of its most successful COSPAR plenary meetings and associated activities, involving over 1,200 participants, in this same conference centre in Graz. I am sure that the members of the Committee will appreciate, as we did, the charm of this historic city and the harmonious atmosphere created by the hospitality of our Austrian hosts. Perhaps you too will have an opportunity after the session to visit the Styrian province, with its splendid chateaux and beautiful landscape. I wish you a most productive session.

The CHAIRMAN: I now call upon the representative of the European Space Agency (ESA).

Mr. ARETS (European Space Agency)(ESA)(interpretation from French): First of all, I should like to address to you, Mr. Chairman, the congratulations of the European Space Agency (ESA), of which Austria is a very active member, on your election to preside over the Committee on the Peaceful Uses of Outer Space. I should also like to express our appreciation to Ambassador Jankowitsch for his activities during his 20-year chairmanship of the Committee.

First, I should like to describe the present status of the European Space Agency's activities and programmes. In the scientific field, the Agency's programme has a budget with a real annual growth of 5 per cent. That has been the case since 1986. That growth is enabling us to implement our Horizon 2000 programme. I would note that the HIPPARCOS satellite, which, after the failure of one of its boosters, was unable to attain the orbit originally planned, is now enabling us to gather nearly all the data we had hoped for, thanks to measures that were not part of the original plan. The failure of the booster was amply compensated by the ingenuity of the technical teams of the Agency's Operations Centre.

The ULYSSES probe launched in 1990 is continuing its mission of exploring the solar system, and European scientists are pleased to participate in the Hubble Space Telescope Programme with the National Aeronautics and Space Administration of the United States (NASA), which, despite some manufacturing anomalies, does provide us with high-quality data.

After its encounter with Halley's Comet in 1986, the GIOTTO probe was judged to be serviceable, and in 1992 it should encounter the Grigg-Skjellerup Comet. Even though some of the scientific instruments on board were damaged during the first encounter, the scientific community expects to receive a lot of data from the GIOTTO probe when it encounters the Grigg-Skjellerup Comet.

(Mr. Arets, ESA)

The preparation of the Infrared Space Observatory and SOHO-CLUSTER programmes, which will study Earth-Sun relations, is progressing normally. European scientists are now deciding upon programmes to be implemented by the end of this century or the start of the next.

In the field of earth- and environment-monitoring satellites, the Agency expects in the next few weeks - probably in the second half of July - to launch the ERS-1 satellite, which will be an important European contribution to the study of environmental problems. The principal feature of that satellite is its radar instrumentation, which, apart from its inherent characteristics, will enable it to gather data by day and by night, whatever the cloud cover. This is very useful in Europe, but it is even more useful over tropical regions - especially tropical forests - where a nearly permanent cloud cover has considerably restricted the effectiveness of other earth-monitoring instruments. The satellite will be the first in a series, for ERS-2 is now being developed and should be launched in 1994. In addition, the instruments aboard the ERS satellites will also be on the first polar platform, which is scheduled to be launched by the Agency in 1997.

The Committee will note that in the field of environment the Agency is implementing a programme that can make a useful contribution to international cooperation in that field. We hope that there will be close coordination between all countries that may be capable of launching satellites in the future. It is essential that the data thus collected be used in the interests of all countries, particularly the developing countries that might make the most intensive use of them.

I should like to point out that the Agency's activities are closely coordinated with those of the Commission of the European Communities, particularly with a view to establishing a European environment agency.

(Mr. Arets, ESA)

Of the specific projects in the planning stage I would mention the TREES project for monitoring tropical forests by means of radar instrumentation, which is now being formalized between the Agency and the European Economic Community; Europe will be contacting the countries involved to establish what we hope will be exemplary cooperation.

A number of non-European countries have already expressed a wish to receive data from the ERS satellite. Among them we should mention - apart from Canada, which actively participates in the ERS programme and will have two receiver stations - Brazil, Ecuador, India, Pakistan, China, Thailand, Indonesia and Australia, as well as Japan and the United States. Each of these countries is in the process of concluding agreements for direct reception of ERS data.

North Africa and West Africa are covered by the Agency's stations in Fucino, Italy, and Maspalomas in the Canary Islands, and the Agency intends to assist countries that so desire to make better use of radar technology, particularly within the context of International Space Year.

An important part of the Agency's programme is devoted to infrastructure in orbit and comprises three main programmes: ARIANE V, COLUMBUS and HERMES.

The ARIANE V launcher is in the process of development and the programme is proceeding on schedule. The first flight is planned for 1995.

The COLUMBUS programme is Europe's contribution to the International Space Station programme. Its development depends on the progress made by the principal partner in that ambitious programme of international cooperation, and the COLUMBUS programme is being redefined to take into account the changes made by the National Aeronautics and Space Administration of the United States (NASA). We hope that the uncertainties that have bedevilled the first phase

(Mr. Arets, ESA)

of the programme will soon be dissipated and that the agreements signed in September 1988 will be fully implemented.

The HERMES programme has also been subjected to a number of technical changes that should make it safer and more in line with the funds available. As with the COLUMBUS programme, that will mean a two- to three-year delay in the programme's completion.

A meeting of the Agency's Board at the ministerial level will be held in November at Bonn. That important meeting will be called upon to ratify the revised plans for the overall programmes of infrastructure in orbit as well as to give additional impetus to application programmes, particularly the satellite programmes that will provide environmental monitoring.

Completing this rapid overview of the Agency's present status, I should like to remind the Committee that since 1 October 1990 the Agency's new Director General has been Mr. Jean-Marie Luton, the former Director General of the CNES, the French National Centre for Space Research.

I should also like to inform Committee members of the Agency's main activities in the field of international cooperation.

A short while ago I made reference to the International Space Station programme, in which the United States, Japan, Canada and the European Space Agency are participating. We are organizing an ambitious undertaking on a partnership basis. The programme is a complex one, and the variety of interests among the partners makes it even more so.

In the scientific field the Agency is participating, along with the United States, the Soviet Union and Japan, in closely coordinated studies of Earth-Sun relations, which in Europe are being carried out under the SOHO-CLUSTER programme. This international cooperation is taking place with a

(Mr. Arets, ESA)

minimum of formalities, but we hope that the programmes being implemented by each partner will produce maximal results.

On the bilateral level, cooperation between NASA and the ESA is involved in the present operation of the Hubble Space Telescope and the ULYSSES probe, which were launched in 1990. Next year NASA will launch on the Agency's behalf the EURECA recoverable laboratory, which will enable us to perform microgravity experiments for a period of six months. EURECA will enable us better to prepare future activities to be carried out aboard the space station or the independent module, the Free Flyer, within the framework of the COLUMBUS programme.

The Agency and the Soviet Union have set up five working groups under an Agreement reached a year ago. Promising cooperative initiatives are being undertaken in the fields of the material sciences, life science and earth monitoring, space science and manned space-transport systems. A number of working meetings have been held in an excellent spirit of cooperation.

(Mr. Arets, ESA)

As an example, mutually beneficial coordination should be set up to facilitate the exchange of the data created by the radar equipment carried on the Soviet ALMAZ satellite and the European ERS satellite.

On 11 April, during the symposium held at Venice by the European Association for the International Peace Year, the Agency signed a cooperation agreement with Hungary that will promote joint projects and strengthen links between Hungary and the Agency. Prospects for cooperation with Poland, Czechoslovakia and Romania are also being explored.

A large Agency delegation will be travelling to Tokyo for the sixteenth annual Japan-ESA meeting. In addition to multilateral cooperation, bilateral cooperation will be reviewed in such fields as earth monitoring, satellite recovery, component reliability and so on.

The Agency is continuing to cooperate with many other countries, the foremost of which are China, India, Brazil and Argentina. In more general terms the recent launch of ERS-1 has given rise to considerable interest and has led the Agency to undertake a number of initiatives to promote the use of the data produced by that satellite in various ways, such as training courses, pilot projects, the setting up of work stations and encouragement of the creation of ERS-1 receiver stations.

I should also like to mention that the Agency will be participating in International Space Year. The Agency and many of its member States are active members of the Space Agency Forum for International Space Year (SAFISY) and contribute to many of the projects being carried out under its aegis. The launching of ERS-1 and the decision to ensure continuity of data via the financing of the ERS-2 satellite, which is to be launched in 1994, represent the best contribution the Agency could have made to International Space Year.

(Mr. Arets, ESA)

In conclusion, I should like to mention the excellent cooperation the Agency has enjoyed for a number of years with the United Nations Outer Space Affairs Division, especially with regard to the space-applications programme. We believe that excellent work is being performed with very modest resources. The Agency participates actively and substantively in various United Nations activities in the realm of outer space. The Agency and its member States are playing an active role in United Nations activities for International Space Year and is making available to the countries of North Africa and West Africa data from remote-sensing satellites received at the Fucino and Maspalomas stations; it will continue to assist in the use of that data in the form of training courses.

The Agency is happy to participate in the Committee's work and hopes that this session will produce fruitful results.

The CHAIRMAN (interpretation from French): As Mr. Arets said, the Agency is contributing most actively to the United Nations Programme of Space Applications, and I think that is very positive.

ORGANIZATION OF WORK

The CHAIRMAN: Before adjourning the meeting I should like to announce that the speakers' list for agenda item 5, "General exchange of views", will be closed at the end of this afternoon's meeting. Those wishing to speak should inscribe their names promptly.

Tomorrow afternoon we shall discuss agenda item 6, "Ways and means of maintaining outer space for peaceful purposes". Delegations are urged to inscribe their names on the list of speakers for that item.

(The Chairman)

Tomorrow morning, at 10.30, the first speaker will be the representative of the United Nations Disaster Relief Organization (UNDRO). Following his statement there will be a brief technical presentation, including a video tape illustrating the use of space technology for disaster investigation and mitigation. In view of the fact that we are faced with natural disasters all over the world, I would imagine that all members are very much interested in that presentation, so please participate tomorrow morning.

The meeting rose at 4.45 p.m.